

DETAILED ACTION

Claims 1-28 are currently presented and have been examined.

Response to Arguments

Applicant's arguments filed 14 January 2008 have been fully considered but they are not persuasive.

The Applicant's argument that the limitation of appending a frame fragmentation indicator to the end of a first data segment for promoting "transmission of a high priority frame over the low priority frame" does not suggest or make optional nor conveys an intended use is not persuasive. Interpreted broadly, the limitation does not require that the transmission actually occur, but merely suggests that the appended indicator optionally encourages the transmission of the higher priority frame and does not require it. When combined with the idea that appending a frame fragmentation indicator to the end of a data segment causes the above to occur, it further creates a interpretation that the appended indicator may not actually cause the higher priority frame to be sent. Therefore, the claimed "promotion" of a step is not positively recited because it does not require the transmission step to occur. The Examiner's positions as previously presented are also maintained and the claims are not in condition for allowance.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

Claims 1-28 are rejected under 35 U.S.C. 103(a) as being unpatentable over US Patent Pub. US 2002/0150100 A1 to White in view of US Patent 5,828,835 to Isfeld.

Regarding Claims 1-3, 9, 10, 16, 21-23, White discloses a network system, method and apparatus for adaptive frame fragmentation, (Abstract; Figs. 1-13; paragraphs -#0013-0015: & Claims 1-37) comprising:

- a sending unit to transmit a first frame fragment, the first frame fragment including a first (payload - entire frame per pending Claim 10) data segment, extracted from a low priority frame and a first frame fragmentation control information appended to the end of the first data segment to promote transmission of a high priority frame over the low priority frame, the first frame fragmentation control information includes at least (i) a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame, (ii) a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment generated from the low priority frame, and (iii) a channel number, (paragraphs - #0030-0038; 0042-0052; & Claims 1-37), (Examiner notes that White clearly teaches appending a first identifying field to a first subframe, wherein said identifying field indicates the relative position of said first subframe within a fragmented frame, which obviously reads upon Applicant's appended "fragmentation control information" encompassing "a first frame fragmentation indicator to specify whether a frame fragment is a first fragment generated from the frame", or "a frame fragment sequence number to specify a sequential order number assigned to the first frame fragment generated from the low priority frame". Specifically, Examiner

finds that one of ordinary skill in the art at the time of invention by Applicant would have obviously considered a first frame fragmentation indicator or a frame fragment sequence number to be "indicative of the relative position of a subframe within a fragmented frame" for purposes of adaptively identifying and fragmenting frames of lower priority into smaller subframes in order to minimize the time spent by frames of higher priority queuing for transmission over the link - paragraph #0033); and the sending unit to transmit a second frame fragment after transmitting the first frame fragment, the second frame fragment including a high priority frame and a second frame fragmentation control information appended to the end of the high priority frame, (per pending Claims 2 & 22), (paragraphs #0030-0038; 0042-0052; & Claims 1-37); and the sending unit to transmit a third frame fragment after transmitting the second frame fragment, the third frame fragment including a second (payload) data segment extracted from the low priority frame and a third frame fragmentation control information appended to the end of the second data segment, (per pending Claims 3 & 23), (paragraphs - #0030-0038; 00420052; & Claims 1-37); and

a receiving unit to receive the first, second and third frame fragments transmitted by the sending unit, (paragraphs - #0030-0038 & 0042-0052).

Though White clearly teaches frame fragmentation and the appending of a first identifying field, (frame fragmentation control information) to a first subframe, (White Claims 1-37), White does not specifically enumerate the inclusion of a channel number within that first frame fragmentation control information. Isfeld Clearly teaches priority based message fragmentation routing process wherein the message fragments clearly include a first frame fragmentation indicator, a last frame fragment indicator, a frame fragment sequence number, a channel number and the appending of data, (Isfeld Figs. 13-17; Col. 27, lines 62-67; Col. 28; & Col. 29, lines 1-35), wherein it would have been obvious to one of ordinary skill in the art at the time of invention by Applicant to include the channel information in the first frame fragmentation control information appended to the end of the first data segment.

The motivation to incorporate the Isfeld message/channel information fragment into the White priority-based message fragmentation method is found within White which enumerates a need for a technique which would minimize the latency and jitter exhibited by frame-based communication systems by adaptively

identifying and fragmenting frames of lower priority into smaller subframes in order to minimize the time spent by frames of higher priority queuing for transmission over the link, (White paragraphs # 0012 & #0033), wherein knowledge of the channel number is obviously necessary to the proper transmission and receipt of said frame data. Moreover, Examiner notes that the inclusion of channel information in the data packet was well known in the art at the time of invention by Applicant, thus in light White's teaching of appending data, inclusion of channel information within said data would have been obvious and as such, is found to be unpatentable. Thus Claims 1-3, 9, 10, 16, 21-23 are found to be unpatentable over the combined teachings of White and Isfeld.

Regarding Claims 4-8, 12-15, 17-20 & 24-28, the combined teachings of White and Isfeld are relied upon as noted herein. As noted above, White discloses a network system, method and apparatus for adaptive frame fragmentation incorporating a frame relay protocol, (paragraph #0043), comprising frames and frame fragments, (paragraphs #0043-0044), a first frame fragmentation indicator within the first frame fragmentation control information, (per pending Claims 4, 12, 17 & 24), a last frame fragment indicator, (per pending Claims 7, 15, 17 & 27), a frame fragment sequence number within the first frame fragmentation

control information, (per pending Claims 5, 13, 18 & 25),
(paragraphs #0045-0046, 0054 & 0055).

Though White clearly teaches frame fragmentation, White does not specifically enumerate the inclusion of a channel number within the first frame fragmentation control information, (per pending Claims 6, 14, 19 & 26), and an extension indicator, (per pending Claims 8, 15, 20 & 28). Isfeld Clearly teaches priority-based message fragmentation routing process wherein the message fragments clearly include a first frame fragmentation indicator, (per pending Claims 4, 12, 17 & 24), a last frame fragment indicator, (per pending Claims 7, 15, 17 & 27), a frame fragment sequence number, (per pending Claims 5, 13, 18 & 25) and a channel number, (per pending Claims 6, 14, 19 & 26), (Isfeld - Figs. 13-17; Col. 27, lines 62-67; Col. 28; & Col. 29, lines 1-35). Again, as noted herein, Examiner finds that it would have been obvious to one of ordinary skill in the art at the time of invention by Applicant to include the channel information in the first frame fragmentation control information appended to the end of the first data segment. 8. Additionally, Examiner notes that regarding an extension indicator, (per pending Claims 8, 15, 20 & 28), White enumerates the reservation of the seven least significant bits of the first octet to ensure all fragment headers are distinguished from and other framing

headers and/or flags which may be introduced during processing, (White paragraph #0047), as well as an FCS frame for purposes of CRC error detection, (White - paragraph #0043), and Isfeld enumerates a 4-bit field for software specific command list entries, (Isfeld - Fig. 15 & Col. 25, lines 31-39), wherein either portion of the frame could obviously be used to extend, add or indicate the extension or addition of fields to the frame fragment control information. Thus Claims 4-8, 12-15, 17-20 & 24-28 are found to be unpatentable over the combined teachings of White and Isfeld.

Regarding Claim 11, the combined teachings of White and Isfeld are relied upon as noted herein. As noted above, White discloses a network system, method and apparatus for adaptive frame fragmentation incorporating a frame relay protocol, (paragraph #0043), comprising frames and frame fragments, (paragraphs #0043-0044), and payload data, (paragraph - #043), wherein it would have been obvious for said payload data to include a data segment extracted from a frame, as said frame may be any number of bytes in length, and wherein within a frame fragmentation apparatus and method, it would have been obvious to divide up large portions of data into smaller portions for faster and more reliable relay of the same. Thus Claim 11 is

found to be unpatentable over the combined teachings of White and Isfeld.

Conclusion

THIS ACTION IS MADE FINAL. Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George C. Neurauter, Jr. whose telephone number is 571-272-3918. The examiner can normally be reached on Monday-Friday 9am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Nathan Flynn, can be reached on 571-272-1915. The fax phone number for the

organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/George C. Neurauter, Jr./
Primary Examiner, Art Unit 2143